Capability Gap Brief

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Top Ten Gap Listing

FMID Section	Priority
Unmanned Aircraft Systems	1
Assault Support	2
Target Acquisition	3
Counter fire / Targeting	4
Fire Support Coordination	5
Information Operations	6
Personal Equipment	7
Small Arms / Crew-Served	**8**
Mobility / Counter-Mobility	9
Rockets / Artillery	10
Riverine / Special Operations	11
Public Affairs	12
Offensive Air Support	13
Electronic Warfare	14
Civil Affairs	15
Offensive Anti-Air Warfare	16

Capability Analyzed
Small Arms Crew Served

4 JCA's supported: Hi Pri-Provide & Employ Joint Fires

9 MCT's supported : Hi Pri-Attack Targets

Deficiencies in Conditions: Urban Terrain engagement limitations, Environmental effects on weapons capabilities (altitudes, weather)
Deficiencies in Standards: Movement Rates / Weapons Effects; Target detection, identification, and effective engagement

Inputs utilized for analysis:

- MAGTF FAA dtd Jun 2006
- MCLL Database
- JCIDS supporting documentation for all PORs identified
- Marine Corps Midrange Threat Estimate: 2005-2015
- Grey Book – Mar 06
- Warfighting Program Evaluation Board POM-10 Guidance
- DC, PP&O GCE Advocate's Capability List. – Jun 06
- Initial end-strength increase planning figures

Gap, Excess, or Shortfall

D	**IAR, SPR and MGL will require fundamental changes to current doctrinal squad employment**
T	**Weapon System additions / modification will require ITS and UTS creation / changes**
M	**Weapons Systems that are lighter, more accurate and ergonomic (i.e. Mortars made with Inkanel, SPR, DMR); Further Decrements in current PORs will create additional gaps**
F	**Armory space must be considered to support T/E**

Current PORS:

- Infantry Automatic Rifle (IAR)
- Designated Marksmen Rifle (DMR)
- Special Purpose Rifle (SPR) (new start)
- Multi-Shot Grenade Launcher (MGL) (new start)
- Mortars
- AAWS-H (new start)
- SOPMOD Kit

Impact on the MAGTF

- FMID conducted a FNA that assessed the ability of current and programmed joint warfighting capabilities against the range of operational conditions and standards identified in the FAA. This process identified a list of gaps that supported 4 JCAs and 9 MCTs associated with Small Arms/Crew served weapons. This gap is important to the Marine Corps because employment of weapons in a combined arms approach across the full spectrum of conflict is in essence the bread and butter of the MAGTF.

- **Describe how the gap impacts our ability to execute operating concepts:** The Marine Corps has a requirement to support the operational concepts of Expeditionary Maneuver Warfare (EMW), Operational Maneuver from the Sea (OMFTS), and Ship-to-Objective-Maneuver (STOM). An inherent theme throughout these concepts is gaining a positional advantage against our enemies through dominant fires and maneuver. Gaps in our ability to accurately attack targets with direct/indirect fires will negatively impact individual/unit ability to suppress and destroy targets. If unresolved, this gap will also impact the MAGTF's ability to close with and maneuver against targets, which will significantly reduce the tempo we seek to gain in these concepts.

- **Is the gap identified related to a required DO Capability? If so, what additional requirements are needed to achieved the desired capability?** One overarching element of Distributed Operations is that units will conduct operations separated beyond the limits of mutual support. The equipment and weapons that distributed units employ must be robust enough to gain and maintain an advantage on our foes until the distributed MAGTF can aggregate its assets thereby necessitating the enhancement and improved capabilities in our equipment and weapons. In order to meet the tenets of DO we must provide Marines with more capable/lethal weapons and further develop and increase our organic and joint fire support.

Key Attributes Needed to Resolve the Gap

- **Identify the key attributes and associated measures of effectiveness a solution will possess.**
  - **Address the elements of time, distance, effects and obstacles to overcome.**

  - Improvements upon existing weapons and the development of new capabilities will provide significant enhancements to the MAGTF's ability to conduct and sustain combat operations across the spectrum of conflict. All efforts focus on providing lighter, more durable weapons with increased range and accuracy, longer service life, and reduced maintenance.

  - Lighter more portable weapons are essential to the ability of dismounted infantry to gain positional advantages with decisive speed and overwhelming operational tempo. Increased capability in this area will improve the MAGTF Commander's ability to maximize dismounted maneuverability.

New or Current Capability Issues

- **Was the gap identified because we are establishing a new capability? An addition or improvement of an existing capability? If yes, explain:**

  Previously existing capability gaps were further validated by the increased requirements to improve the lethality and maneuverability of the individual Marine/ MAGTF while executing the missions related with the USMC concepts of EMW, STOM, and DO. Current capabilities are being improved through the emergence of innovative/improved technology.

- **Is the basic capability MC unique?** No this is not a Marine Corps unique capability gap. This capability is being addressed Jointly with sister services through the JCIDS process. Efforts such as the Joint Service Small Arms Strategy analysis is one effort focused on mitigating these gaps. Where USMC requirements differ due to the unique operating environment associated with USMC concepts of EMW, STOM, and DO or differing operational philosophies; the USMC has sought Marine Corps specific solutions (IAR, SPR, MK-11, DMR).

Integration Concerns

- **Describe critical linkage(s) to other Integration Division.**
  - LID: New start programs (M-32 MGL, AAWS-H, SPR, IAR) will require close coordination with LID to ensure logistical support and sustainment requirements are addressed.
  - Force Protection: Enhanced maneuverability and lethality of weapons will undoubtedly improve the survivability of the individual Marine.
  - C2: Enhancements in fire control, such as the digital fire control systems will necessitate their integration with C2 systems.

DOTLPFM Impacts

- **Doctrine.**
  - Doctrine alone will not address this capability gap. As enhanced capabilities evolve, changes in Doctrine, Tactics, Techniques and Procedures must keep pace. Example:
    - Weapons such as the IAR will change the fundamental employment of the Marine Rifle squad and will necessitate updates to doctrine.
- **Organization**
  - There are no organizational changes, MOS realignments or Force structure changes that will mitigate this gap.

DOTLPFM Impacts

- **Training**
  - **How could training be modified or provided to mitigate or eliminate the gap?**
    - Training without new or modified materiel solution will not mitigate or eliminate gap.
    - Additional training will be required to effectively employ and maintain new/enhanced systems.
  - **What training requirements are identified for the fielding of new equipment?**
    - Fielding of enhanced equipment capabilities will generate the requirement to modify existing training. As we field new technology there are associated training requirements for the individual Marine to employ them. This training will be necessary at the all entry level training at all Functional Learning Centers (SOI, TBS, IOC). There will also be a requirement to conduct operator and maintainer level training at the units being fielded new equipment.

DOTLPFM Impacts

- **Leadership and Education**
  - L&E will not mitigate this gap however, the material solutions we are currently seeking will mitigate the risk associated with executing the wide variety of missions associated with current USMC operating concepts.
  - Ensuring these capabilities receive priority within the combat development process will help mitigate these gaps.
- **Personnel**
  - There are no personnel changes or MOS realignments that will mitigate this gap.
- **Facilities**
  - As new/improved weapons are fielded consideration must be given to armory space and unique weapons rack requirements.

DOTLPFM Impacts

- **Materiel**
  - **The following PORs identify materiel solutions to address the gaps.**
    - Infantry Automatic Rifle (IAR)
    - Designated Marksmen Rifle (DMR)
    - Special Purpose Rifle (SPR)
    - Multi-Shot Grenade Launcher (MGL)
    - Mortars
    - Anti-Armor Weapon System-Heavy (AAWS-H)
    - Special Operations Modification (SOPMOD) Kit

DOTMLPF Impacts

- **Materiel**
  - Small Arms/Individual weapon:
    - **Infantry Automatic Rifle (IAR) will provide the Marine automatic rifleman with enhanced maneuverability and displacement speed, as well as the ability to suppress and destroy both point and area targets. Provides increased accuracy and reliability over the M249 SAW.**
    - **Designated Marksmen Rifle (DMR) provides precision weapon for use in units other than sniper teams to provide close-in fire protection.**
    - **Special Purpose Rifle (SPR) provides is a new start program that will provide a precision fires capability at the squad level at distance of 300-500 meters.**
    - **Multi-shot Grenade Launcher (MGL) is a hand held, semiautomatic multi-shot grenade launcher that provides enhanced firepower to the squad level.**
    - **Special Operations Modification (SOPMOD) Kit provides a complement of equipment for use with the CQBW.**

DOTMLPF Impacts

- **Materiel**
  - Crew Served:
    - **Mortars**. The Mortar initiative is a joint effort to integrate technology throughout the lifecycle of the systems. This effort seeks to decrease current weights by 30%, decrease total system costs, and allow greater flexibility/transportability. The USMC has the lead for the 60mm mortar tube. Commonality between the 60mm and 81mm bipods to reduce training differences (Training will need to be addressed by ITS).
    - **Anti-Armor Weapon System-Heavy (AAWS-H)** provides the Marine Corps with a highly mobile, inherently accurate weapon system designed to defeat modern threat armor beyond the effective range of enemy tank main gun systems. It will also provide the capability to penetrating intervening mediums and fortified positions.

Recommendation

- **Recommendation:** Provide Continued support for the Materiel Developer's solutions to address the gaps:
  - Infantry Automatic Rifle (IAR): Currently the CDD has been staffed within CDTS. The program has PMC and O&M funds FY08-FY09 however currently $4M short of originally programmed funds (taken to support Katrina relief effort).
  - Designated Marksmen Rifle (DMR): Operational Requirements Document (ORD) established requirement. Currently conducting M-14 PIP for lighter stock/improved rail system. Must ensure funding line remains.
  - Special Purpose Rifle (SPR): Urgent SON completed as a result of UUNS. MCSC will procure and field to forces in theater. AAR/performance will be Proof of Concept for further procurement.
  - Multi-Shot Grenade Launcher (MGL): Fielding of initial capability to meet an UUNs completed in Feb 06. SON established requirement and we are moving to a full POR. Funding identified in the FY08 supplemental insufficient due to increased production cost and increased AAO (202k).
  - Mortars: ICD waiver approved to proceed with Engineer Change Proposals for life cycle management activities/sustainment (Inconel program). Draft CPD to field non-developmental replacement to be staffed.
  - Anti-Armor Weapon System-Heavy (AAWS-H) Approved CDD US Army led effort.
  - Special Operations Modification (SOPMOD) Kit: Product Improvement Program (PIP) in conjunction with US Army.